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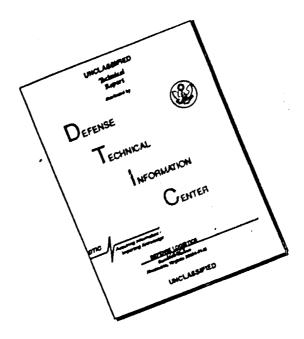
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DEPARTMENT OF ... ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

IN REPLY REFER TO

AGAM-P (M) (18 Jul 69) FOR OT UT 692141

24 July 1969

SUBJECT: Operational Report - Lessons Learned, Headquarters, 31st Engineer

Battalion, Period Ending 30 April 1969

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1. Subject report is forwarded for review and evaluation in accordance with paragraph 5b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT UT, Operational Reports Branch, within 90 days of receipt of covering letter.

2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

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KENNETH G. WICKHAM
Major General, USA

The Adjutant General

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FOR OFFICIAL USE ONLY

DEPARTMENT OF THE ARMY HEADQUARTERS, 31ST ENGINEER BATTALION (C)(A)
APO San Francisco 96490

EGEA-3

9 May 1969

SUBJECT:

Operational Report Lessons Learned of HQ, 31st Engineer Battalion (C)(A) for the period ending 30 April 1969 RCS CSFOR-65

THRU:

Communding Officer 79th Engineer Group (Const) ATTN: EGE-3 APO 96491

Commanding Officer 20th Engineer Brigade ATTN: AVDI-OS APO 96491

Cormanding General US Army Viotnan ATTN: AVRGC-CST

APO 96375

TO:

Communder-in-Chief US Army Pacific ATTH: GPOP\*DT APO 96558

FOR OT UT 692141

#### SECTION I. OPERATIONS: SIGNIFICANT ACTIVITIES:

- a. Command: IMC George N Androvs replaced IMC Gerald P Kelley as Battalion Commander.
- b. Personnel, Administration, Morale, and Discipline:
- (1) At the end of the reporting period the strength of the battalion, including attached units, was 100% of that authorized. The monthly strength figures for the quarter are shown below:

	STRENGTH	OFF	WC	10-1/1	TOTAL
28 February 1969	AUTH ASGD	41 43	4	966 909	1011 1036
31 March 1969	AUTH ASGL	41 42	4	966 915	1011 961
30 April 1969	auth Asgd	41 40	4	987 93 <b>7</b>	1032 981

(2) Shortages by MOS in the Battalion this reporting period are indicated in the following charts:

TMOS	TIMI	ASGD(FED)	ASGD(MAR)	ASCD(AIR)
12B40	88	83	80	53
62 <b>F</b> 30	<b>1</b> 9	12	7,	12

(3) The following charts list losses and gains during the quarter:

LOSSES	OFF	WO	M	AGG
CONUS Rotation Infusion Miscollencous TOTAL	11 0 2 13	0 0 1	272 20 <i>31</i> 6	283 20 27 330
GAINS	OFF	MO	DN .	VGG
CONUS Replacements Infusion In-country Regs	8 0 1	0 0 1	334 0 6	342 0 8
TOTAL	9	1	340	350

(4) Thirty-eight personnel extended their foreign service tours:

OFF	<u>wo</u>	<u>IPM</u>	TOTAL
1	0	37	38

(5) The following awards were presented to 31st Engineer Battalion personnel:

MEDALS	OFF	1.70	LM	TOTAL
Bronzo Star	3	1	16	20
Army Commendation	2	0	33	55
Purple Hoart	0	0	5	5
Soldiors Modal	0	0	2	2

(6) The following emlisted promotions were made to the grade indicated:

	<u>E4</u>	E5	<u>E6</u>	<u>E7</u>	E8	E9	TOTAL
February	25	16	1	6	0	0	48
March	31	6	2	1	0	0	40
April	34	13	5	0	_1_	0	_53
TOTAL	90	35	8	7	1	0	141

(7) Disciplinary Cases:

	.RT 15	SCM	SICM	TOTAL
Fobruary	17	1	2	20
March	15	0	6	21
April	_7_	0	_1_	8
TOT'.L	39	1	9	49

(8) Roenlistment during this poriod was:

	FEB	MR	MR
First Torn	1	1	0
Careor	6	1	1

(9) In the percle area the allocation for Rost and Recuperation received and filled by personnel of the battalien are shown below:

LCCATION	FEB	MAR	LIR	TOTAL
Austrolia	9	13	12	34
Bangkol	11	16	11	38
Hawaii	14	18	11	43
Manila	1	3	2	6
Taipai	9	11	7	27
Kuala Lumpur	0	2	(s) O	2
Singuporo	6	6	3	15
Tolyo	1	5	2	8
Hong Kong	7	10	6	23
Ponang	0	0	0	0
Sub-total	58	84	54	196

LOCATION	FIELD	MAR	Ark	TOTAL
In-country	4	4	$I_{\epsilon}$	12
TOTAL	62	88	50	208

- c. Intolligence and counterintelligence:
- (1) All intelligence data is received from G-2, 1st Air Cav Div and IIFFY intelligence surmaries.
- (2) The main activities of the S-2 section during the last reporting period consisted of a minesweep from Phuoc Vinh to the Song Be Bridge on LTLIA conducted daily and reconneciseence for switchle sources of laterite for reads and airfields within the III CTZ. The S 2 section located a sand deposit in a stream just outside the perimeter at Camp Convad. The sand is currently being mined and stockpiled in the base camp for concepts work, eliminating the need for sand to be conveyed to Thuoc Vinh from the Long Binh area.
- d. Plans, Operations, and Training:
- (1) Operational Support: During the reporting period 80% of the total battalien effort was devoted to Operational Support missions. The greatest percentage of the battalien's effort was expended in support of the 1st Air Cav Div. There were three basic types of Operational Support missions:
  - (a) Direct support of combat operations.
  - (b) Doliborate construction to support future operations.
- (a) Troop, equipment and material support to MCV and HIFFV for construction and maintenance of existing roads, airfield, fire support base and MCV Advisor housing.
- (2) Lines of Communication (LOC): Deliberate read restoration and once gency read repair were conducted. 2.3% of the total buttalian effort was expended on LOC work during the reporting period.
- (5) Base Construction: Base construction for the battalion was again hold to a minimum dum to priority operational support missions and construction of MACV Advisor facilities.
- (4) Design and Construction Engineering: The design requirements have increased this period due to a 79th Engr Gp requirement that a design must be submitted with every BOM. The increased design requirement was handled entirely within the battalion's assets.
  - (5) Training:
- (a) The three hours of instruction on Command Information and engineering subjects which were given each week have been temporarily discontinued due to operational commitments.

(b) All replacements for the 31st Engineer Battalion are currently receiving three days of replacement training at the division training contemperated by the 1st Air Cay Div.

#### e. Logistics and Maintonance:

(1) Maintenace: The overall average deadline rate for the battalion during the quarter has been 14.2%. The critical items everage deadline rate has been 17.8%. By north these deadline rates are:

OVERVILL	CRITICAL	
12.8/	18.47	
	17.6% 17.5%	

This doubline rate is 9.5% higher everall and 11.0% higher on critical items than it was on the last reporting period. This is attributed to the poor quality of the support maintenance this unit has received.

(2) Supply: Supply problems ancountered during the reporting period were minimal. Major construction items by type projects are listed below:

•	BASE	LOC	MY.CV	169R	OTH STT	REV DEV
Lumber, BF	-	-	69,746	57,091	473;639	-
Corr stool, SH	•	94	.676	598	4,872	
Miro cloctric; L	F -	-	8,800	**	7,885	
Insect coreen, R	L -	***	12	34	51	-
Tlywood, SH	-	-	·4 <b>1</b> 8	6.1	٠_	••
Nails, IB	-	<b>A</b>	2,230	2,350	10,570	-
Coment, BG	•	-	270	-	2,630	-
Culvert, LF	**	<b>H</b>	2/	***	3,372	040
M8A1 untting, ID	L -		-	4	3,428	

- f. Force Development: During this period there was very little nevenent of units within the battalien. The 2nd plateen of the 557th LE Company moved from Quan Lei to Phuce Vinh on 15 Jan 69 to work on the Song Be River float bridge approach and the Phuce Vinh Airfield. They then returned to Quan Lei on 29 Mar 69 to work on the Quan Lei ASP.' The 1st plateen of C Company moved to Be Due on 5 Har 69 to work on the lACV Housing project there. At the end of the reporting period this plateen was still at Be Due.
- Governed Management: The aviation requirements of the battalion have increased for both fixed wing and rotary wing aircraft. The battalion requires more rotary wing aircraft for command and control on a regularly scheduled basis. The fixed wing aircraft support received by the battalion consisted of C130, C123 and C7A aircraft. The number of flights received was sufficient however the erratic arrival times of aircraft made it extremely difficult to plan aircraft loads. Often times when a C-130 was expected, a C-123 would arrive then the loads would have to be switched on the K loader causing unnecessary delays and sometimes an aborted mission.

#### h. Civil Affairs:

(1) Although the operational commitments of the battalion remained high the 31st Engr Bn was able to construct a fish pond for the village of Phu Giao which will be stocked by the Vietnamese government with fish. The bat talion also donated 10 truck loads of scrap building materials to the Catholic priest in the village of Phu6c Vinh for use by the village.

#### i. Civilian Personnel Affairs:

- (1) The continued use of local nationals for prefab operations and KP has continued to be successful and without incident.
- j. Headquarters and Headquarters Company:
- (1) Command: 1LT James C Hamm replaced 1LT William Stolz III as Company Commander on 21 Merch 1969.
- (2) Headquarters Company has continued to support the line companies. All of the heavy equipment section's effort has been in support of the line companies.
- (3) Personnel have continued to work on the Headquarters Company area by improving the drainage for the upcoming monsoon season and leveling unusw/areas for use by the S-4 section for storing building materials. Bunkers were also improved due to the frequent rocket and mortar attacks during TeT

#### k. Company A. 31st Engineer Battalion:

- (1) Command: 1LT Terry Simmons replaced CPT Jerry D Williams as Company Commander on 7 April 1969.
- (2) Company A laid over 244,132 sq ft of M8A1 matting on the Phuoc Vin airfield, and constructed an approach road 1115' long for a float bridge over the Song Be River. This latter project required removing over 40,000 C of earth. The company was engaged in minefield clearing at Phuoc Vinh. ML for the 1st Air Cav Div, construction of six UE-1 revetments, and construction of 1000 meters of perimeter road with 180' of 72° culvert, 180' of 36° culvert and 120' of 48" culvert.
- 1. Company B, 31st Engineer Battalion:
  - (1) Command: CPT Callwell continued as Company Commander.
- (2) During this period B Company's work effort has been at the separate locations. One plateon was stationed at Song Be and the remaining portions of the company at Quan Loi. Euring the reporting B Company has been primarily involved in operational support missions. This work includes repair of POL facilities, construction of four 175mm gunpads, construction of perimeter bunkers, a water supply facility, and cantonment projects for Quan Loi Base Camp. The plateon in Song Be has repaired POL facilities, the Song Be airfield, and four gun pads. They have also installed arrestors and constructed bunkers for the MACV compounds at Phuoc Binh and Song Be.

- m. Company C, 31st Engineer Battalion:
- (1) Command: 1LT Woodruff replaced CPT Webb as Company Commander on 29 March 1969.
- (2) During the reporting period Company C constructed a timber trestle bridge, 14 fixed wing revetments, culverts with cement headwalls. They were also involved with minefield clearing operations and the resurfacing of the Phuoc Vinh runway with M8Al matting. C Company also sent a platoon to Bo Den to work on a MACV Housing project.
- n. Company D, 31st Engineer Buttalion:
- (1) Command: 1LT Christian Helfenbein replaced 1LT Lon E Oberpillar as Company Commander on 9 February 1969. CPT Jerry D Williams replaced 1LT Christian Helfenbein as Company Commander on 6 April 1969. 1LT Lynn Page replaced CPT Jerry D Williams as Company Commander on 29 April 1969.
- (2) During this period D Company completed repairs on the airfield at Katum, Bunard, and Loc Ninh, all of which are open to C-130 aircraft at present. Repairs are also under way at Tonle Cham and a Type II C71 strip is now being constructed at Duc Hue. D Company also continued to construct bunkers for the 79th Engineer Group.
- o. 557th Light Equipment.Company:
  - (1) CFT James P Reynolds continued as Company Commander.
- (2) The 557th LE Company continued work on the ASP and airfield at Phu Vinh and completed the upgrade of LTL1A from Phuar Vinh to the Song Be bridge. The platoon at Lai Khe continued to work on base camp drainage and the perimeter road. The platoon at Quan Loi initiated construction of an ASP and continued work on upgrading QL 13 and Route 303.

## SECTION II. LESSONS LE RNED: COMMUNITERS OBSERV.TION, EVALUATION, AND RECOMMENDATIONS

- a. Personnel: None.
- b. Intelligence:
- (1) OBSERV..TION: When conducting a minesweep of LTL1A between Phuco Vinh and the Song Be bridge, the sweep team found several areas of 1.3 road covered with trash. When clearing the trash from the road the team noticed several poorly concealed dummy mines in the road which consisted of beer cans filled with dirt. Upon a more thorough search with a metallic mine detector several cleverly concealed mines were found. The mines consisted of beer cans filled with explosives attached to pressure firing devices consisting of two bamboo strips wrapped with wire. When the strips were pressed together completing the circuit, the mine would detonate.

- (2) EVALUATION: The mines appeared to be of the anti-personnel type with the sweep team as their target.
- (3) EECCMMENDATIONS: Any objects lying on the road should be treated as a suspected booky trap and each item must be cleared with that in mind. Although the incident may appear to be a harassing action, the clearing should proceed in a slow deliberate manner using metallic mine detectors.

#### c. Operations:

- (1) OBSERV..TION: The MBA1 matting on the runway at Phuoc Vinh started deteriorating after less than one month of service. The main faults with the matting were the cover plates on the locking lugs breaking off, the matting cracking along its seams and the poor fit of different brands of matting. This deterioration occurred under a loading of principally C+30, C123 and C aircraft with loading cycles per day of 10, 10 and 30 respectively.
- (2) EVALUATION: The MBA1 matting is not strong enough to support such frequent loads of heavy aircraft. After 30 days of use it required six hours of welding per day to keep the strip operational.
- (3) RECOMMENDATIONS: Due to the short life expectancy of light duty mating it would be more economical to maintain unsurfaced runways than to lay light duty matting, which will only have to be replaced by an asphalt strip after twelve months of service.

#### d. Training:

- (1) OBSERVATIONS: The 31st Engineer Battalion initiated its own replacement training program consisting of two days of training per month. This training detracted from the battalion's capability available for projects and was of relatively poor quality due to lack of training aids and inexperienced instructors.
- (2) EVALUATION: The knowledge the training sained from the training side not warrant the affort put into the training by the instructors or the hours lost on essential projects.
- (3) RECOMMENDATIONS: It is recommended that replacements who will be experiencing field type conditions be trained at one of the divisions training centers located in the vicinity of their assigned unit. Replacements from the 31st Engr Bn are currently being trained by the 1st Air Cav Div.

#### e. Engineering:

- (1) ASP Construction:
- (A) OBSERVATIONS: Method for increasing job production in ASP construction.

- (b) EVALUATION: When constructing an ASP it has been found that by constructing the fingers and the inside of the bays first and the back was last that you have a lot more room in which to utilize your graders and compaction equipment, thus increasing job production.
- (c) RECOMMENDATIONS: That when constructing any ASP in the future review this method and use it if it is adaptable to the construction plan.
  - (2) Improve Quality of Laterite:
- (a) OBSERVATION: Laterite containing a high percentage of pebbles can be improved for road construction.
- (b) EVALUATION: When doing horizontal construction with a quality of laterite that has no binder, a construction material which is easy to compact and grade may be obtained by using a ratio of 2 to 1, laterite to clay.
- (c) RECOMMENDATIONS: If using laterite which has little or no binding quality, open a clay pit and combine the laterite and clay in a 2 to 1 ratio respectively.
  - (3) MRS 100 scraper pan:
    - (a) OBSERV.TION: Vulnerability of hydraulic hoses on MRS 100.
- (b) EVALUATION: The hydraulic hoses to the pan on the MRS 100 are mounted on the sides of the pan only 2 feet from the ground. They are exposed to tree stumps and other objects sticking up from the ground.
- (c) RECOMMENTATIONS: A modification work order be approved to shield these lines.
  - (4) Song Be Bridge:
- (a) OBSERVATION: An underground stream was discovered while excuvating an approach for a float bridge across the Song Be river. The stream was located approximately 100° from the river.
- (b) EVALUATION: Water needed to be drained off to allow construction of the road and to prevent the road from being undermined.
- (c) RECOMMENDATIONS: Area should be carefully surveyed to insure the soil is not overly porous and does not contain trapped water or underground streams. If such obstacles are excavated a french drain will drain off a sufficient amount of water to allow construction of a road.
- f. Logistics: None.
- g. Organization: None.

h. Other: Communications:

- (1) OBSERV..TION: Telephone cobles strung from pole to pole are susceptible to damage by morter and rocket fragments.
- (2) EVALUATION: A thirteen pair telephone cable was in use in the Headquarters Company area. In the last rocket attack this cable received seven major breaks and numerous smaller breaks due to shrapnel. This disrupted more than half of the telephone service available in the company.
- (3) RECOMMENDATIONS: All telephone cables, when possible, should be buried at a minimum depth of eighteen inches. Cable diagrams should be made and forwarded to the Deputy Installation Coordinator.

CECRCE N LINDREWS

LTO, CE Commanding EGE-3 (9 May 69) 1st Ind SUBJECT: Operational Report Lessons Learned of HQ, 31st Engineer Eattalion (C)(A) for the period ending 30 April 1969

DA, HEADQUARTERS, 79th Engineer Group, APO 96491

20 May 1969

- TO: Commanding Officer, 20th Engineer Brigade, ATTN: AVEI-OS, APO 96491
- 1. This headquarters concurs with the inclosed Operational Report with the following exceptions:
- a. Reference Section I a, page 1; LTC Andrews replaced LTC Kelley on 26 April 1969. LTC Andrews arrived from the 45th Engineer Group and LTC Kelley was reassigned as deputy IIFTV Engineer.
- b. Reference Section I, d, (5), page 3; The three hours weekly instruction to include Command Information have been reinstated as of this date.
- c. Reference Section I, e, (1), page 4; The support maintenance for the 31st Engineer Battalion has recently increased its effort in supporting the 31st Engineer Battalion. It is the opinion of this command that the Support Maintenance for the 31st Engineer Battalion is doing everything within their capability to improve the maintenance situation for the 31st Engineer Battalion.
- d. Reference Section II, e, (3); An EIR is being prepared for submission through proper channels.
- 2. With the above exceptions this headquarters considers this report an adequate summary of the battalion's activities during the reporting period. The report is submitted in accordance with USARV Reg 525-15.

FOR THE COMMANDER:

SHIGHYØSHI FORITA

del Jois

CPT, AGC Adjutant AVBI-OS (9 May 69) 2nd Ind SUBJECT: Operational Report of 31st Engineer Battalion (Combat) for the Period Ending 30 April 1969, RCS CSFOR-65 (R1)

DA, HEADQUARTERS, 20TH ENGINEER BRIGADE, APO 96491

TO: Commanding General, United States Army Vietnam, ATTN: AVHGC-DST, APO 96375

- 1. Submitted in accordance with USARV Regulation 525-15, dated 13 April 1968.
- 2. Subject report for the 31st Engineer Battalion (Combat) has been reviewed and is considered adequate with the following comments:
- a. Section I, paragraph e(1), page 4: Corrective measures are being taken to improve Direct Support Maintenance for the 31st Battalion. Communication problems between the 31st Battalion and their support are being alleviated.
- b. Section II, paragraph e(2), page 8: Nonconcur. The recommendation of combining clay with laterite for road construction is inadequate from a quality engineering standpoint. Addition of clay may give the appearance of forming a dense surface and compaction may seem easier; however, during the rainy season the water content will reduce the shear strength of the clay, resulting in failure of the road.

FOR THE COMMANDER:

J. J. MONTGOMERY

Major, AGC Adjutant

Copies Furnished: CO, 79th Engr Gp CO, 31st Engr Bn AVHGC-DST (9 May 69) 3d Ind

SUBJECT: Operational Report Lessons Learned of HQ, 31st Engineer Battalion (C)(A) for the period ending 30 April 1969 RCS CSFOR-65

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375 2 2 JUN 1969

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT, APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 30 April 1969 from Headquarters, 31st Engineer Battalion (C)(A).

#### 2. Comments follow:

- a. Reference item concerning M8Al matting, section II, page 7, paragraph c; concur. USARV has recently disapproved a request for M8Al matting at Quan Loi for this reason. When there is a high frequency of C-13O traffic at an airfield the total maintenance effort is less with an unsurfaced airfield. M8Al matting will provide satisfactory service for C7A, Army fixed wing aircraft, Air Force FAC aircraft and occasional C-123 traffic. No further action required.
- b. Reference item concerning Training, section II, page 7, paragraph d; concur. USARV Training Regulation 350-1 does not limit replacement training to those personnel who will experience field type conditions. This training is required for all newly arrived personnel and is required to be completed within seven days after arrival in RVN. The use of division replacement training centers is encouraged. No further action required. Unit will be advised.

FOR THE COMMANDER:

Cy furn: 31st Engr Bn 20th Engr Bde A.R. GUENTHER CPT. AGC

ASST. ADJUTANT GENERAL

GPOP-DT (9 May 69) 4th Ind SUBJECT: Operational Report of HQ, 31st Engineer Battalion (C) (A) for Period Ending 30 April 1969, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 1 0 JUL 69

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorsements and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

C. L. SHORTT CPT, AGC Asst AG

Security Classification				
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CO, 31st Engineer Battalion				
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